

IN THE CLAIMS:

Amend claims 41 and 45 as shown in the following listing of claims, which replaces all previous versions and listings of claims in this application.

1. - 35. (canceled).

36. (previously presented) An information reproducing apparatus comprising:

a light source for generating linearly polarized light;

a medium having an information unit field and only a single linear mark disposed in the information unit field;

an optical head disposed between the light source and the medium, the optical head having a fine aperture;

polarized light control means for controlling the linearly polarized light generated by the light source to pass through the fine aperture of the optical head to generate near-field light having a preselected polarization direction and to irradiate the linear mark in the information unit field of the medium with the near-field light so that the preselected polarization direction of the near-field light is orthogonal to a longitudinal axis of the linear mark; and

a detector for detecting light scattered by the linear mark irradiated with the near-field light.

37. (previously presented) An information reproducing apparatus according to claim 36; further comprising signal processing means for processing a signal from the detector corresponding to the detected scattered light.

38. (previously presented) An information reproducing apparatus according to claim 37; wherein the signal processing means includes means for acquiring data in accordance with an intensity of the signal from the detector corresponding to the detected scattered light.

39. (previously presented) An information reproducing apparatus according to claim 36; wherein the linear mark comprises a linear data mark.

40. (previously presented) An information reproducing apparatus according to claim 36; wherein the linear mark comprises a linear tracking mark.

41. (currently amended) An information reproducing apparatus comprising:

a light source for generating linearly polarized light;

a medium having an information unit field and a plurality of linear marks disposed in the information unit field and extending in different directions from one another;

an optical head disposed between the light source and the medium, the optical head having a fine aperture;

polarized light control means for controlling the linearly polarized light generated by the light source to pass through the fine aperture of the optical head to generate near-field light and to irradiate the linear marks disposed in the information unit field of the medium with the near-field light, and for controlling a direction of polarization of the near-field light so that the direction of polarization of the near-field light irradiated on the linear marks is orthogonal to a longitudinal axis of each of the linear marks; and

a detector for detecting light scattered by the linear marks irradiated with the near-field light.

42. (previously presented) An information reproducing apparatus according to claim 41; further comprising signal processing means for processing a signal from the detector corresponding to the detected scattered light and for acquiring multiple value data from the signal.

43. (previously presented) An information reproducing apparatus according to claim 41; wherein the linear marks comprise linear data marks.

44. (previously presented) An information reproducing apparatus according to claim 41; wherein the linear marks comprise linear tracking marks.

45. (currently amended) An information reproducing apparatus comprising:

a medium having a plurality of information unit fields and a plurality of linear marks disposed in each of the information unit fields and extending in different directions from one another;

an optical head disposed over the medium and having a fine aperture; and

light generating means for generating linearly polarized light, directing the linearly polarized light through the fine aperture of the optical head to generate near-field light and to irradiate at least one of the linear marks in the information unit fields of the medium with the near-field light, and controlling a direction of polarization of the near-field light so that the direction of polarization of the near-field light irradiated on the at least one linear mark is orthogonal to a longitudinal axis of the at least one linear mark; and

detecting means for detecting light scattered by the linear mark irradiated with the near-field light.

46. (previously presented) An information reproducing apparatus according to claim 45; further comprising signal processing means for processing a signal from the detector corresponding to an intensity of the detected scattered light.

47. (previously presented) An information reproducing apparatus according to claim 45; wherein the at least one linear mark comprises at least one linear data mark.

48. (previously presented) An information reproducing apparatus according to claim 45; wherein the at least one linear mark comprises at least one linear tracking mark.

49. (previously presented) An information reproducing method, comprising the steps of:

providing a medium having a plurality of information unit fields and a plurality of linear marks disposed in each of the unit fields and extending in different directions from one another;

generating near-field light by directing linearly polarized light through a fine aperture of an optical head;

irradiating at least one of the linear marks in the respective information unit field of the medium with the near-field light while controlling a direction of polarization of the near-field light so that the direction of polarization of the near-field light irradiated on the at least one linear mark is orthogonal to a longitudinal axis of the at least one linear mark; and

detecting light scattered by the linear mark irradiated with the near-field light.

50. (previously presented) An information reproducing method according to claim 49; further comprising the step of processing a signal corresponding to an intensity of the detected scattered light.

51. (previously presented) An information reproducing method according to claim 49; wherein the at least one linear mark comprises a linear data mark.

52. (previously presented) An information reproducing method according to claim 49; wherein the at least one linear mark comprises a linear tracking mark.

53. (previously presented) An information reproducing apparatus according to claim 36; wherein the linear mark comprises a projection having a linear edge.

54. (previously presented) An information reproducing apparatus according to claim 36; wherein the linear mark comprises a groove having a linear edge formed in the medium.

55. (previously presented) An information reproducing apparatus according to claim 36; wherein the linear mark comprises a plurality of substances having a linear interface and formed in a planar surface of the medium, the substances having different optical properties.

56. (previously presented) An information reproducing apparatus according to claim 55; wherein the different optical properties are different refractive indices.

57. (previously presented) An information reproducing apparatus according to claim 41; wherein each of the linear marks comprises a projection having a linear edge.

58. (previously presented) An information reproducing apparatus according to claim 41; wherein each of the linear marks comprises a groove having a linear edge formed in the medium.

59. (previously presented) An information reproducing apparatus according to claim 41; wherein each of the linear marks comprises a plurality of substances having a linear interface and formed in a planar surface of the medium, the substances having different optical properties.

60. (previously presented) An information reproducing apparatus according to claim 59; wherein the different optical properties are different refractive indices.

61. (previously presented) An information reproducing apparatus according to claim 45; wherein each of the linear marks comprises a projection having a linear edge.

62. (previously presented) An information reproducing apparatus according to claim 45; wherein each of the linear marks comprises a groove having a linear edge formed in the medium.

63. (previously presented) An information reproducing apparatus according to claim 45; wherein each of the linear marks comprises a plurality of substances having a linear interface and formed in a planar surface of the medium, the substances having different optical properties.

64. (previously presented) An information reproducing apparatus according to claim 63; wherein the different optical properties are different refractive indices.

65. (previously presented) An information reproducing method according to claim 49; wherein each of the linear marks comprises a projection having a linear edge.

66. (previously presented) An information reproducing method according to claim 49; wherein each of the linear marks comprises a groove having a linear edge formed in the medium.

67. (previously presented) An information reproducing method according to claim 49; wherein each of the linear marks comprises a plurality of substances having a linear interface and formed in a planar surface of the medium, the substances having different optical properties.

68. (previously presented) An information reproducing method according to claim 67; wherein the different optical properties are different refractive indices.